

COOPERATIVE CONNECTIONS

Invasive Species

**Zebra Mussels
on the Missouri**
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Drone Spraying
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UNCLAIMED CAPITAL CREDITS

Unclaimed Capital Credit Refunds

Listed below are names of former members who have unclaimed capital credit refunds from Codington-Clark Electric Cooperative, Inc. 3520 Ninth Avenue SW, PO Box 880, Watertown, SD 57201. If anyone has information regarding these individuals, please contact the Cooperative at (605) 886-5848 or 800-463-8938 or e-mail: info@ccelectric.coop.

Bailey, Daryl
Big Stone Broadcasting, Inc.
Bohlmann, Jeff
Brandriet, Roger
Brost, Teri R
Buchholz, Karen
Craig, Dana C
Dorsett, Jay
Enstad, Jason
Erickson, Barbara E
Fiechtner, Mark
Fleming, Leon
Folger, Raymond
Gunderson, Orrin O

Haan, Norman
Hale, Niki
Hanson, Kimberly
Hawkeye Enterprises, Inc.
Henman, Eric
Hible, Gary
Jerde, Larry A
Johnson, Rusty
Klatt, Gary
Koehn, Richard
Langdeaux, James J
Lantsberger, Rosemarie
Lapp, John E
Larson, Bernell J

McDowell, Carla
McFarland Farms, Inc.
McLaughlin, John A
Miller, Luvern
Morrison, Dianne
Nelson, David L
Nelson, Michael
Owen, Sidney E
Pathan, Karam
Peterson, Marvid
Peterson, Selmer
Rader, Jerry
Rasmusson, Craig
Reff, David

Reil, Ronald L
Roso, Merlin
Sasser, Christopher
Schmidt, Allen G
Schmidt, Mary
Shaw, Bruce G
St. Pauli Cemetery Assn.
Stricherz, Brenda L
Stricherz, Trent
Timm, Janice
Vig, Ole
Whitney, Myron
Wirkus, Kevin L
Woodruff, Edward A

The benefits of choosing an electric water heater

As expected, most people don't think much about water heaters. They take for granted that they make it possible to have hot showers, clean dinner dishes and enjoy load upon load of freshly laundered linens. The lonely water heater, tucked away in the basement or a utility closet, is out of sight and out of mind.

There are times, however, when your attention turns to that most essential of appliances: when an existing water heater breaks ("Brrr. That water is cold!") or when building or renovating a home.

At those times, a homeowner will make a decision that has consequences that persist for a decade or two, maybe longer. Your water-heating choice will have implications for energy efficiency, cost of use, the environment, safety and reliability. As a trusted energy advisor, Codington-Clark Electric can help you make the right decision.

As a member of the cooperative, you might already know about many of the advantages and benefits of electric water heaters. First, electric water heaters are safe. There is no threat of carbon monoxide poisoning, combustion or explosion. Electric water heaters are environmentally friendly and capable of using electricity generated from solar, wind, hydro and other renewable sources.

Electric water heaters are also easy to install, requiring no expensive gas lines, exhaust flue or on-site fuel tanks. Compared to other fuels, the cost of electricity is stable.

In addition, electric water heaters are emerging as a building block of the future electric grid. These formerly mundane units are evolving into smart appliances and energy storage units that are helping the grid become more stable and more efficient. By heating water when demand for electricity is low and storing the thermal energy for later use, electric water heaters can save you money.

If you have questions about water heater options or other energy efficiency needs, give us a call at (605) 886-5848. At Codington-Clark Electric, we're here to be your trusted energy provider.



COOPERATIVE CONNECTIONS

CODINGTON-CLARK ELECTRIC

(USPS 019-073)

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To report a power outage:

1-844-968-1976

Office Hours:

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Codington-Clark Electric Cooperative Connections is published monthly by Codington-Clark Electric Cooperative, PO Box 880, 3520 9th Ave SW, Watertown, SD 57201-0880. Electric cooperative members devote 50 cents from their monthly electric payments for a subscription. Non-member subscriptions are available for \$12 annually. Periodicals Postage Paid at Watertown Post Office, Watertown, SD 57201 and at additional mailing offices.

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www.ccelectric.coop

Codington-Clark Electric Cooperative, Inc. is an equal opportunity provider and employer.

Reliable Power Supply



Dave Eide

General Manager

C. 605-350-2765

davee@ccelectric.coop

Our main purpose for existence is to supply the membership with reliable, safe, and affordable electric power to run the farms, homes, and businesses in our electric service territory. Your co-op board of directors and employees put a lot of time, thought and effort into this very goal. Keeping the lights on with minimal power outages. It's just what we do. Our power suppliers Basin Electric, East River Electric and the Western Area Power Administration have the same goals that we do. Keep the generators going, keep costs down, maintain the transmission system and make sure the system is safe. Sometimes federal agencies make this job harder for all of us to accomplish these goals.

Recently the EPA has proposed that new natural gas power plants would need to co-fire with hydrogen as a fuel source or install carbon capture equipment. The captured carbon would also have to be transported to an injection site for sequestration. Hopefully somewhere close in vicinity to the plant. This proposal would increase costs and threaten the continued use of natural gas as a generating source as carbon capture and hydrogen technologies are not commercially available.

The EPA also proposed new rules for existing coal and baseload natural gas generating units. They would also be required to install carbon capture equipment and sequester it, or co-fire with hydrogen as a fuel source. The EPA is asking for this while the demand for electricity is increasing dramatically. At the same time our federal government is incentivizing electric vehicles and pushing to electrify the American economy.

In my opinion the timelines for the proposed rules are unworkable. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly impacting reliability and increasing the risk of blackouts.

Codington-Clark Electric sent a letter to the EPA expressing the above-mentioned concerns. NRECA, our national lobby, has also been working in Washington DC to come up with more workable options. Part of the game includes politics. We'll be looking out for you, the Co-op member as we see these things unfold.

Stay safe, and as always, feel free to call, text or email at any time about anything. Thank You!

CLOSED FOR LABOR DAY

Your Co-op's business office will be closed Monday, September 4 to allow employees to spend holiday time with family and friends. As always, call after-hours dispatch at 844-968-1976 if you should experience electric service problems.

No One Can Take Your Place

National Farm Safety and Health Week Sept. 17-23, 2023

The 2019 data for the U.S. Bureau of Labor Statistics indicates that the agricultural sector is still the most dangerous in America with 573 fatalities, or an equivalent of 23.1 deaths per 100,000 workers.

Fall harvest time can be one of the busiest and most dangerous seasons of the year for the agriculture industry. For this reason, the third week of September has been recognized as National Farm Safety and Health Week.

This annual promotion initiated by the National Safety Council has been proclaimed as such by each sitting U.S. President since Franklin D. Roosevelt in 1944. National Farm Safety and Health Week is led by the National Education Center for Agricultural Safety (NECAS), the agricultural partner of the National Safety Council.

Did you know?

- Rural roads pose special dangers especially during harvest season. Watch out for slow-moving farm vehicles and be informed, aware, and patient while sharing rural roadways.
- Farm stress is real, and many things like weather events, tragedies, market uncertainty, or diseases can tip us out of our comfort zone.
- Every day, about 33 children are seriously injured in agricultural-related incidents.
- Hazardous gasses on farms can be found in silos, manure storages, grain bins, and other confined spaces. Be in the know about hazardous gasses and where they can be found on farms.

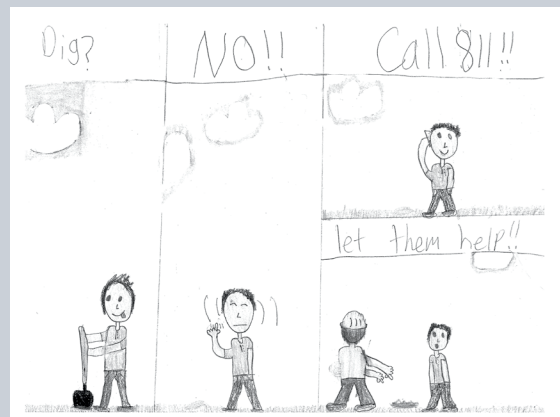
Farm and ranch life can be demanding and stressful. Over the past several years, it has reached a critical stage for the folks who grow America's food with COVID-19 pandemic impacts on top of natural disasters, extreme weather events, financial pressures due to fluctuating commodity prices, labor shortages, trade disruptions and a

long list of other factors. Given these ongoing challenges, it's no surprise that more farmers and farm families are experiencing stress and mental health concerns.

Today, safety professionals still use this promotional week to remind those working in our nation's most dangerous industry to be careful. Agriculture's death rate is why farmers and ranchers must use safe farming practices during harvest and throughout the year.

South Dakota's electric cooperatives urge our agricultural producers to make better safety and health decisions this harvest season and during the next year. Join us in promoting safety during the 80th annual **National Farm Safety and Health Week Sept. 17-23, 2023.**

During this time, please encourage others to adopt safe practices and behaviors as we prepare to prevent injuries during this harvest season.



Call 811!

Evey Hinrichs, Age 9 3/4

Evey Hinrichs advises people it's not safe to dig before calling 811. Evey is the daughter of Kelby and Carrie Fey from Aberdeen, S.D., members of Northern Electric Cooperative.

Kids, send your drawing with an electrical safety tip to your local electric cooperative (address found on Page 3). If your poster is published, you'll receive a prize. All entries must include your name, age, mailing address and the names of your parents. Colored drawings are encouraged.

DIPS AND SPREADS

SPINACH DIP

Ingredients:

16 oz. sour cream
1 cup mayonnaise (must be mayo)
1 pkg. frozen chopped spinach, thawed and drained
1 can water chestnuts, chopped
1 tbsp. minced onion
1 tsp. season salt
1/2 tsp. Accent
Dash of Worcestershire sauce
2 dashes of hot sauce

METHOD

Serve with Club or Ritz crackers.

Linda Hubbard
Rapid City, S.D.

CREAMY CINNAMON DIP

Ingredients:

1 pkg. (8 oz.) cream cheese, softened
1 container (8 oz.) sour cream
1/4 cup packed brown sugar
2 tbsps. milk
2 tps. ground cinnamon
1 tsp. all natural pure vanilla extract

METHOD

Beat all ingredients in medium bowl with electric mixer on medium speed until well blended. Spoon into serving bowl. Cover.
Refrigerate until ready to serve.
Serve with fresh fruit slices, cookies or pound cake or angel food cubes.
mccormick.com

CARAWAY CHEESE SPREAD

Ingredients:

1 container (12 oz.)
Cheddar cheese spread, at room temperature
2 tps. minced onions
1 1/2 tps. whole caraway seed
1/2 tsp. Lawry's® Seasoned Salt

METHOD

Mix cheese spread and seasonings in medium bowl. Cover.
Refrigerate at least 2 hours to blend flavors.

Serving Suggestion: Serve with assorted vegetables such as celery sticks, cherry tomatoes, jicama sticks, carrot sticks, endive leaves, and/or assorted crackers.

mccormick.com

Please send your favorite recipes to your local electric cooperative (address found on Page 3). Each recipe printed will be entered into a drawing for a prize in December 2023. All entries must include your name, mailing address, phone number and cooperative name.

Energy Efficient Windows



Miranda Boutelle
Efficiency Services
Group

Q: : My windows are old and drafty, and I'm thinking about replacing them. Can you recommend a few options I should consider?

A: Upgrading or improving your windows is an important component of your home's energy efficiency. According to the Department of Energy, heat gain and loss through windows consumes 25% to 30% of residential heating and cooling energy use.

Start by identifying the kind of windows you have. Are they single pane or double pane? Looking closely at the window's edge, you can see the number of windowpanes. Are the frames metal, wood or vinyl? Some manufacturers etch the make and model numbers in a corner of the glass, so you can look up the manufacturer for more information.

Single-pane windows and double-pane windows with metal frames are the least energy efficient. The lower the efficiency of your existing windows, the higher the potential for energy savings.

There are several options for improving your windows, ranging from replacement windows to storm windows to budget-friendly repairs.

Window Efficiency

Several components can make windows more efficient. High-quality frame materials insulate and reduce heat transfer. Two or more panes of glass with space in between (filled with air or gas) improve the window's insulation capability. Warm edge spacers hold the panes of glass the proper distance apart and help insulate the edges of the panes. Low-emissivity coatings applied to the glass can reflect infrared light, keeping the heat in during the winter and out during the summer.

Window efficiency is rated in U-factor and Solar Heat Gain Coefficient, or SHGC. U-factor measures heat transfer through the window, which relates to how well it insulates. The lower the U-factor, the more efficient the window. The

SHGC measures how effectively the window blocks heat from the sun.

Replacement and Maintenance

If you want to replace your existing windows, I recommend shopping for ENERGY STAR®-certified windows. ENERGY STAR® sets specific U-factor and SHGC requirements based on your geography, so you get the best fit for your location. Replacement windows offer additional benefits, like improved operability and aesthetics. As with many industries, the window industry has been impacted by price increases over the past few years, so keep in mind, this can be an expensive upgrade.

Storm windows are a lower-cost solution for some homes. Traditional storm windows are made with clear glass. Low emissivity storm windows have energy savings similar to replacement windows at about a third of the cost.

Storm windows are mounted to the interior or exterior and are available in operable styles, so you can still open and close your windows. Look for ENERGY STAR®-certified models.

If you want to maintain the historic architecture of your existing windows, low-e storm windows are a great option. Some companies can refit your existing window frames with custom double-pane glass and weatherstripping.

As with any home improvement project, be sure to get multiple quotes to compare pricing and scope of work. You may find additional savings with rebates from your electric co-op, or state or federal tax credits for window upgrades.

If new windows or storm windows are not in the budget, your best bet is to maintain your existing windows. Keep the paint and caulking on the exterior in good condition. That will help prevent damage from the elements. Caulk around the inside trim, ensure sash locks are installed properly and seal tight when locked. There are a variety of weatherstripping types for windows to keep drafts at bay.

Whether you replace or make improvements to what you have, adding efficiency to your windows will add year-round comfort to your home.

TERMESPHERE PAINTER

Local Art Legend Has a Complete Perspective on Art

Jocelyn Johnson

jocelyn.johnson@sdrea.coop

Dick Termes, a local artist from Spearfish, S.D., has an original artistic ability. He has found a way to capture the complete perspective of his environment into one piece of art – the Termesphere.

This unique type of art isn't practiced by anyone else – it's an exclusive artform that embodies all that a person sees around them if they were to turn in a circle while looking up and down.

Termes hit upon the idea of six-point perspective in 1968 at the University of

Wyoming where he earned his master's degree in art.

Later, while teaching visual perspective as an art professor, his panoramic view of art grew. During a class discussion, a student of his compared five-point perspective to a ball. This comment was the start of his six-point perspective art.

"I imagined I was on the inside of a ball but still was drawing on the outside," Termes said. "I would have what's behind me in the picture as well as what's in front of me and all around me. This would be a six-point perspective and I would have to put it on a sphere to do that."

"I thought at the time, certainly other people have done this; but, 52 years later, I realize, no, no one has done this," Termes said. "It opened such a big door. There could be a thousand people doing it and we wouldn't be doing the same thing." Termes has gained

notoriety worldwide for his art. In 1998, he was invited to showcase his art alongside M.C. Escher, a renowned graphic artist, at the University of Rome.

Even though his art is known worldwide, his home is South Dakota. "I get a lot of inspiration by living in South Dakota and the Black Hills," Termes said. "It's been the perfect spot for me."

Termes received the South Dakota Governor's Award in the Arts and has been inducted into the South Dakota Hall of Fame. His hometown of Spearfish, S.D., also proclaimed September 9 as "Dick Termes Day."

In 1992, Termes opened Termesphere Gallery outside of Spearfish, S.D., where he sells his art. Since its opening, his gallery has been visited by thousands of art enthusiasts from around the world.

"People are intrigued with this art because it's the first time a painting can be the total environment," Termes said. "It doesn't have to just be a square or rectangle. Every second of every day, you're in a complete environment. All you have to do is turn around and look at is and you have a Termesphere."





INVASIVE SPECIES

State run boat checks and washing stations aim to reduce the spread of aquatic invasive species, such as zebra mussels, in South Dakota.

Zebra Mussels and Their Impact on the Missouri River

Frank Turner

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The Missouri River in South Dakota, renowned for its outstanding recreational areas, fishing holes and scenic campgrounds, draws a wide swath of tourists from around the world. However, these welcoming public waters have become the home of one unwelcome intruder—the infamous zebra mussel.

Endemic to southeastern Europe, the zebra mussel made its journey to the United States Great Lakes in the '80s as an unlikely stowaway, clinging to the hulls of large ships and barges. Since their arrival, the mussels have proliferated across the Midwest, spreading from one river system to the next.

So how can a mollusk, merely the size of a fingernail, inflict millions of

dollars in economic damage to local recreation, agriculture and hydroelectric power generation? Martin Goding, Gavins Point Dam maintenance and operations manager with the U.S. Army Corps of Engineers, explains that one zebra mussel can spawn more than a million eggs in a season, overrunning the local ecosystem. Once established, the mussels latch onto every viable surface in the water—they envelop pipes, ruin beaches and disrupt hydroelectric dams.

In 2015, local governments detected South Dakota's first infestation of zebra mussels in Lewis and Clark Lake. Goding says this discovery ignited a fierce battle against the invasive species.

“We are in the war to eradicate the zebra mussel, but I don't think we're ever going to completely eliminate them,” said Goding. “They are multiplying faster than we can get rid of them.”



Zebra Mussels completely envelop Gavins Point Dam's water gates, adding up to an additional 30 tons of weight.



With few effective treatments at their disposal, the U.S. Army Corps of Engineers has been forced to adjust to operating within a river infested with mussels. The change has significantly

increased the maintenance costs associated with running Gavins Point Dam. Pipes, essential for cooling the dam as it produces electricity, now require routine disassembly and cleaning. Over the course of six months of warm weather, the dam's lakeside gates collect an additional 30 tons of weight from the relentless accumulation of zebra mussel shells and the debris they carry.

"We have spent a million and a half dollars over the last five years just in maintenance to deal with this invasive species—and that's not even counting the cost of materials," said Goding. "Zebra mussels have really impacted the operation and turned maintenance into a nightmare."

Beyond maintenance, zebra mussels have also disrupted power generation. Outbreaks of zebra mussels within

the dam's infrastructure have resulted in unscheduled and forced outages, interrupting an energy source that has been historically reliable.

"One could safely say that Gavin Point Dam has lost a million dollars in power generation over the last five years," said Goding.

Since the initial invasion in 2015, some strategies have emerged to mitigate damage from the invasive species. The introduction of UV lights and the addition of strainers have curbed the presence of zebra mussels within the dam. Even still, the mussels have continued their spread northward through the Missouri River to Lake Sharpe near Pierre, S.D.

According to Goding, the experiences at Gavins Point Dam serve as a stark warning for dams and water systems yet to face infestation.

"Lewis and Clark Lake is beyond prevention," said Goding. "We have crossed that bridge and they are not going away."



Make Time for Safety This Harvest Season

Harvest season often means putting in long hours, which can make it difficult to stay alert and on the lookout for potential hazards.

Be prepared for potential emergencies before the rush of harvest season begins. Be sure that you can see well in work areas. Consider adding extra lighting around grain bins and augers.

Take the time to look up and look out for electrical lines. Always be aware of where they are in relation to your equipment. Keep a minimum of 10 feet away from all electrical equipment, and lower extensions before moving equipment. If you see a power line that is sagging or low, contact the co-op. Also keep an eye out for guy wires. While these wires are not energized, they can bring down live lines.

In equipment with auto-guidance systems, less focus is needed on steering, which may lead some drivers to think

that they do not need to be as aware of navigation issues. Yet, even while using a GPS with auto-steering, farm workers need to keep safety in mind and stay focused on their surroundings. Recognize when you need to take breaks so that you can be active and engaged in the farm work.

Additional electrical safety tips include:

- Use a spotter when operating large machinery near lines.
- Inspect the height of farm equipment to determine clearance.
- Look up and use care when moving any equipment such as extending augers or raising the bed of grain trucks around power lines.
- Always set extensions to the lowest setting when moving loads to prevent contact with overhead lines. Grain augers should always be positioned horizontally before being moved.
- Never attempt to move a power line out of the way or raise it for clearance.

If the machinery you are operating does make contact with a power line, stay on the equipment. Immediately call 911, warn others to stay away, and wait for the utility crew to cut the power.

Only on the rare occasion that the machinery catches fire should you leave the vehicle after contact is made. If this is the case, jump off the equipment with your feet together and without touching the ground and machinery at the same time. Then, still keeping your feet together, hop to safety as you leave the area. Never touch anything that is in contact with a power line.

HARVEST SAFETY TIP

Use a spotter and deployed flags to maintain safe distances from power lines and other equipment when doing field work.



Operation Round Up®

"Small Change Can Make a Big Difference"

What is Operation Round Up®?

Operation Round Up® is a voluntary program that does just what the name implies. Each month we will "round up" the electric bills of participating members to the next highest dollar. For Example, a members monthly bill of \$150.75 would automatically be rounded up to \$151.00, with the additional 25 cents going to the Operation Round Up Fund. Donations are tax deductible, and members will be sent a summary of yearly contributions each January.

How do I participate?

Participation in Operation Round Up is strictly voluntary. You can sign up by sending back the attached mailer with your payment, or you can stop in or call and ask to be included in the Operation Round Up® program.

How much will it cost members?

The average contribution per member is about 50 cents per month or \$6.00 per year. With this small change, thousands of dollars can be generated and will mean a big difference to the people in our service area.

Where will the money go?

All Operation Round Up donations will be placed in a trust administered by an independent Board of Directors. The Board of Directors is made up of five Codington-Clark Electric board members who serve on the board on a voluntary basis. It is

the responsibility of the Board to receive, evaluate all requests and to decide how to distribute the funds. The trust fund will be used for charitable projects and causes throughout the service area.

Who is eligible for funds?

The funds will be available to help any charitable projects for organizations, groups, families, or individuals within the service territory of Codington-Clark Electric. No funds shall in any way be used to support any candidate for political office or for any political purpose.

How do I apply for funds?

An application must be submitted to the Trust Board by a member of Codington-Clark Electric. Watch for future mailings of the Codington-Clark Electric Cooperative Connection newsletter for an announcement of when applications will start being accepted for contributions from the fund. For more information regarding Operation Round Up contact Codington-Clark Electric at (605) 886-5848.

Together, by giving a few cents a month, Codington-Clark Electric members can make a big impact on life in our area!



OPERATION ROUND UP APPLICATION

☐ Yes, I want to participate in Operation Round Up
(If on budget billing 50 cents per month will be donated to the trust fund)

Name _____

Address _____

City _____ State _____ Zip _____

Phone _____ Acct# _____

Please apply an additional \$ _____ for Operation Round Up each month and bill to my account.



Drone Spraying

A Modern Tool in Today's Agriculture

Scott Waltman

As modern agriculture continues to evolve, drones are one of the newer tools farmers can use to help their land and crops.

The hovering, unmanned aircraft can be handy for small areas and places it's difficult for traditional spraying options to get to, according to those who offer the service to those in the ag sector.

Drones aren't the weapon of choice to spray chemicals on 1,500 acres of corn or soybeans, but that day is likely coming, said Derek Ver Helst, who operates Dakota Unmanned Aerial in Brandt.

Closer to the coasts, drones are already used for a multitude of purposes that aren't just fun and shooting videos. They are only going to become more prominent in ag-heavy states like the Dakotas, he said.

"The possibilities are pretty much

just limited by your imagination," Ver Helst said.

He said his background as an agronomist piqued his interest in spraying with drones. Dakota Unmanned Aerial is a side hustle he started about two years ago. He works as a senior conservation agronomist for AgSpire.

Nick Williams had a background in agriculture working for CHS Cooperative and selling farm equipment before starting Williams Drones southeast of Parkston in August 2020. Business has been good, he said, estimating that it has doubled each year.

"It's really taken off, it continues to grow," Williams said.

He and Ver Helst agree that farmers have been receptive to the relatively new option, willing to give it a try when the project isn't too big.

Williams said he does mostly ag-related work. In late July, he was staying busy with fungicide applications.

Drones are great near shelter belts and around wet areas. Those are places



that are hard for a land rig or spray plane to get to. Drones work better because they are smaller and more agile, he said.

A route is mapped out and the drone reads that information and flies mostly autonomously, Williams said.

He sets the height, speed, gallons of application per acre and swath width. Once a drone is in the air, it does almost all of the work, though Williams said he can control the height a little, if needed.

Drones have sensors and other features so they don't run into trees, equipment, wind turbines or structures, he said.

Depending on the amount of land to be sprayed, it can take longer to map a field than to spray it, Ver Helst said.

His drones carry 10 liters, but others have a capacity of 40 liters, he said. When a drone runs out of chemical, it returns back to the operator, who puts on a new tank, changes the battery and sends it back out, Ver Helst said. The drone will pick up spraying right where it left off, he said.

In 2016, land-grant university researchers and educators started work to increase the use of drones in agriculture, according to information from the U.S. Department of Agriculture.

That work continues today. It includes identifying and evaluating the most user-friendly and cost-effective drone platforms and sensors, according to the USDA.

Some drone operators offer swarm spraying, Van Helst and Williams said.

For instance, there could be five drones programmed to follow the same grid over a field, pasture or slough working in unison, Van Helst said. As one runs out of spray, it returns for a new tank of chemical and battery until the job is finished.

Van Helst said he doesn't do a lot of spraying. Most of it is on pastures.

But, he said, he has done some work in orchards and vineyards where grapes are grown.

Williams has branched out a little more. Last year, he said, he was hired to do a dust-control project at the Sanford Underground Research Facility in the Black Hills. That is the former Homestake gold mine near Lead.

And both men say drones can be used to combat one of South Dakota's least-popular commodities – mosquitoes.

Drones can be used to spray for skeeters on fairgrounds, when there's a big city gathering and even in a residential area.

During the COVID-19 pandemic, they were even used to shower stadiums with antibacterial spray, Van Helst said.

One drone operator in Texas was contacted to see if drones could be used to drop fish food into a pond, Williams said.

He said his drones can cover about 20 acres an hour, though some can do 30 hours an acre. And he expects the new drones released next year will be able to spray 40 hours in an acre.

For large fields, a land rig or a spray plane is still a better bet, Williams said. A traditional ground sprayer can probably cover 70 acres an hour, he said.

Van Helt said his T-40 drone can handle about 100 acres a day.

One challenge in getting started is getting all of the licensing needed from the Federal Aviation Administration.

He spent about two years testing and writing exemptions and working through the legalities.

Commercial drone operators need a remote pilot certificate from the FAA. Another license is needed to dispense chemicals from a flying aircraft, Van Helst said.

He said he has procured 14 FAA exemptions and will need two more next year.

That's why some drone operators hire a business to navigate that process. That's the route Williams took.

Being a drone operator can be fun or frustrating, just like any other job, he said. He just checks the forecast and hopes it holds. Trying to spray when the wind is 20 mph or more just isn't going to work, he said.

Even so, Van Helst said, drones are a fantastic tool. Ground rigs and spray planes will always be needed, and drones are just one more option for farmers to tap.

"There's a right time and a right place for everything," he said.





The Viborg-Hurley School District's new electric-powered school bus is expected to arrive in September.

South Dakota School District Powers Forward with New Electric Bus

Frank Turner

frank.turner@sdrea.coop

The shift from gas and diesel-powered vehicles to electric alternatives is gaining momentum across the U.S., encompassing cars, semi-trucks, and even school buses. Among these making the change is the Viborg-Hurley School District, which is preparing to modernize one of their classic yellow school buses.

The initiative began when Viborg-Hurley School District secured a grant through the EPA's Clean School Bus Program earlier this year, enabling the purchase an electric school bus to join the school's fleet. Using nearly \$400,000 from the grant, the school bought their bus and accompanying charging station from Lion Electric,

a Canada-based electric vehicle bus manufacturer. Southeastern Electric, a local South Dakota cooperative,

was instrumental in encouraging the school district to apply for the grant, according to Matt Jensen, the Viborg-Hurley School District business manager.

"We have community members working at Southeastern who are always looking out for the school's best interests," said Jensen. "They keep us informed about opportunities like this."



Set to arrive in September, the new bus reimagines the classic yellow school bus for a greener future. Its entirely electric engine doesn't require any traditional fuel and instead relies on an electric motor and a charged battery to transport students. To comply with the grant, the school district will have to retire one of their existing diesel engine busses, phasing out the old technology for something new.

According to Jensen, the introduction of new electric technology into the school district's bus fleet has elicited a few questions

and some skepticism from the local communities. With a top speed capped at 60 miles per hour and a range of up to 155 miles, the bus comes with its own set of limitations. However, Jensen explained that the vehicle's primary purpose will be for everyday local bus routes, rather than long-distance extracurricular travel.

"There was, and maybe still is, some hesitation because it's something new," said Jensen. "That being said, there's still a lot of excitement and hope that this becomes a more efficient and cleaner way to operate our bus fleet."

The school district will not

be without support during this transition. Lion Electric offers complete after-sales support for their vehicles and nearby services providers have the capability to service the vehicle as necessary.

"What drew us to Lion is that their buses are climate tested, which is important to us in South Dakota," he said. "They are specifically designed for harsher climates. I think it will just take some getting used to but I think the community, our students and bus drivers, are excited for the new opportunity."

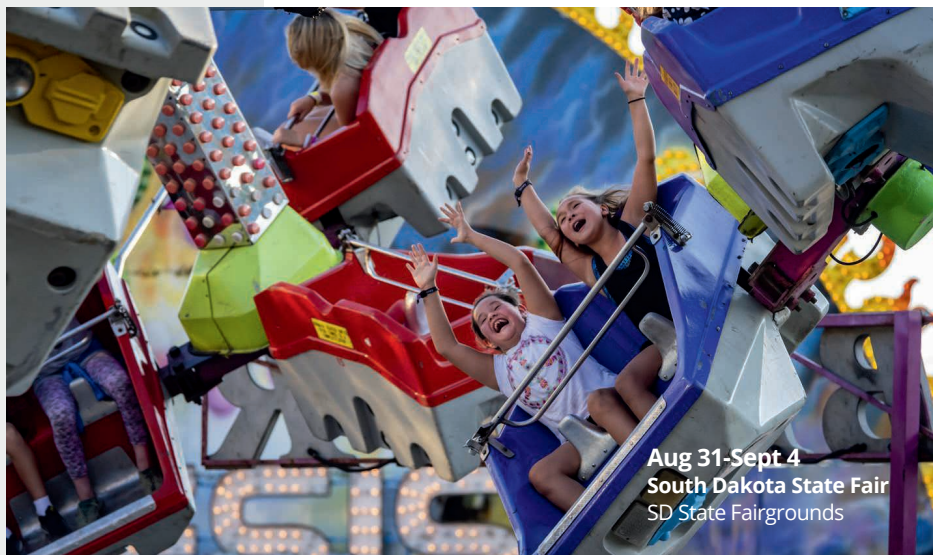


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SEPT 2
Hidewood Valley Barn Dance

7 p.m.
47236 183rd St
Clear Lake, SD

SEPT 4
Hidewood Valley Steam Threshing Show

Steam Whistle Blows
1 p.m.
47236 183rd St
Clear Lake, SD

SEPT 8-10
James Valley Threshing & Tractor Show

World's Largest Steam Traction Engine
Andover, SD
605-868-3242

SEPT 9-10
Old Iron - Fall Harvest Festival

Delmont, SD

SEPT 10
10th Annual Black Hill Beer Run

Spearfish Campground Pavilion
Spearfish, SD
605-642-7730

SEPT 10
100th Anniversary of Little Brown Church

11 a.m.
Service, Potluck & Auction
West of Hayes
Hayes, SD

SEPT 11-17
Traditions & Olivia American Legion

Olivia, MN
320-523-1000

SEPT 11-17
HOBO Days

Live Music-Fun
Olivia, MN
320-523-1000

SEPT 16
Midland Appreciation Day

Theme: Automobiles
1:30 p.m.
Midland, SD

SEPT 17
St. Anthony of Padua Catholic Church

Church Bazaar
12 p.m.
Hoven, SD

SEPT 22-24
Coal Springs Threshing Bee

Meadow, SD
605-788-2229

SEPT 23
Springfield Dakota Senior Meals Fall Festival

9 a.m.
Springfield Community Building
Springfield, SD

SEPT 30
Day of Wellness

10 a.m.
Sturgis Armory
Sturgis, SD

SEPT 29-30
Junkin' Market Days

Ramkota Exhibit Hall
Sioux Falls, SD
605-941-4958

OCT 6-7
Holman Acres Pumpkin Fest & Vendor Show

Philip, SD
605-441-1060

OCT 7
Spirit of Dakota Award

Huron Event Center
Huron, SD
605-352-6073

Note: Please make sure to call ahead to verify the event is still being held.